



Waste Management Programmatic Environmental Impact Statement

An Overview of the Waste Management PEIS

Public Reading Room
U. S. Department of Energy
Nuclear Operations Office

The Department of Energy (DOE) Waste Management Programmatic Environmental Impact Statement (WM PEIS) provides a department-wide evaluation of management alternatives for treating, storing, and disposing of radioactive and hazardous waste. This evaluation examines the environmental impacts of managing the five types of waste left primarily from nuclear weapons production and energy research: waste with both low-level radioactive and hazardous components, low-level waste, transuranic waste, high-level waste, and hazardous waste.

DEVELOPING THE WASTE MANAGEMENT PROGRAM

Many of DOE's wastes are currently stored while awaiting treatment to reduce the toxicity or hazards of the waste. After treatment, these wastes must be safely disposed using approved methods. The analysis and results presented in the Waste Management Programmatic Environmental Impact Statement (WM PEIS) will help DOE decide at which sites to treat, store, and dispose of these various wastes in a safe and responsible manner.

Due to the complexity and special management requirements of each of the five waste types (see text box at right), the WM PEIS analyzes each waste type separately. The WM PEIS examines a number of factors relative to the facilities that are needed and the potential DOE sites where they could be operated.

While the WM PEIS has been developed to help make decisions on where to treat, store, and dispose of waste, the WM PEIS is not the only basis for these decisions. Budgets, schedules, and national priorities will likely be considered in making these decisions, as well as analyses in other DOE studies, such as the *Baseline Environmental Management Report (BEMR)*, *Risks and Risk Debate: Searching for Common Ground (Risk Report)*, and the Site Treatment Plans developed in compliance with the Federal Facility Compliance Act. These and other tools should provide decision makers with a breadth of knowledge necessary to make national environmental decisions.

Waste Types Considered in the WM PEIS

Low-level Mixed Waste (LLMW): LLMW is Low-Level waste that is also contaminated with hazardous waste regulated under Subtitle C of the Resource Conservation and Recovery Act.

Low-Level Waste (LLW): Includes all radioactive waste not classified as HLW, mixed waste, and TRUW. LLW also excludes uranium and thorium tailings. These wastes are subject to provisions of the Atomic Energy Act.

Transuranic Waste (TRUW): Material with concentrations over 100 nanocuries per gram of waste, such as plutonium or other long-lived radionuclides that are heavier than uranium. Most TRUW was generated during the production of nuclear weapons and contains hazardous constituents regulated under Subtitle C of the Resource Conservation and Recovery Act.

High-Level Waste (HLW): Resulted from the chemical processing of spent nuclear materials. HLW is stored largely as a liquid or sludge, with some waste in the form of calcine. HLW contains hazardous constituents regulated under Subtitle C of the Resource Conservation and Recovery Act.

Hazardous Waste (HW): Waste that is regulated under Subtitle C of the Resource Conservation and Recovery Act. It contains hazardous constituents but no radionuclides. HW is generated at most of DOE installations in a variety of quantities and forms (e.g., laboratory solutions, acids, bases, and degreasing agents).

SCOPE OF THE WM PEIS

Under the National Environmental Policy Act (NEPA), a Programmatic Environmental Impact Statement is prepared to evaluate the potential environmental impacts and implications of a major policy or program. The WM PEIS provides a national perspective for identifying preferred strategies and sites for waste management. Site- or project-level NEPA documents or other analyses may then be prepared to assess the potential impacts of design, construction and operation of treatment, storage, and disposal facilities at different locations on the selected sites. These site- or project-specific studies will "tier" from and incorporate information from the WM PEIS.

In assessing potential environmental impacts, the WM PEIS considers existing and projected waste volume information, conceptual and existing facility designs, and site environmental information. Chapters 1 through 3 of the PEIS document discuss the scope, purpose and need for the analysis, and the waste management alternatives. Chapters 4 and 5 define the existing conditions at the sites and methodologies used in the analysis. Information on the potential impacts at each site can be found in Chapters 6 through 10, which discuss the five waste types. Chapter 11 discusses cumulative (or overall) impacts, and Chapter 12 mitigation measures.

DECISIONS TO BE MADE

The WM PEIS includes five types of waste, requiring individual decisions for each waste type over time. In effect, the WM PEIS evaluates five distinct, but related, programs in one document. Department-wide decisions on waste management strategies will result in specific actions at individual DOE sites.

A programmatic decision to be made using information from the WM PEIS will be the identification of a national configuration for treating mixed hazardous and radioactive waste. As required by the Federal Facility Compliance Act of 1992, DOE is working with States and the U.S. Environmental Protection Agency (EPA) to develop Site Treatment Plans that propose the sites, technologies, and facilities to be used by DOE in treating mixed waste stored at 40 sites in 20 states. The WM PEIS evaluates the potential environmental impacts associated with the proposals made in the Site Treatment Plans.

Figure 1 depicts these mixed waste treatment and other waste type decisions that will consider information provided in the WM PEIS. Decisions include *WHAT* management strategy will be applied for each waste type and *WHERE* (at which DOE sites) wastes will be treated, stored, or disposed. Decisions may not necessarily be made at the same time.

Figure 1. Decisions Supported by the WM PEIS

DECISION	LLMW	LLW	TRUW	HLW	HW
WHERE TO TREAT	✓	✓	✓		✓
WHERE TO STORE			✓	✓	
WHERE TO DISPOSE	✓	✓			

WASTE MANAGEMENT ALTERNATIVES

The WM PEIS identifies and evaluates numerous alternatives for managing, on a national basis, the current and projected inventories of the five types of waste. Of the 54 sites addressed in the WM PEIS, 17 contain the bulk of the waste and have the potential capability for the future treatment, storage, or disposal of one or more waste types. The WM PEIS considers four categories of alternatives for each of the five waste types examined. Each waste type is evaluated separately in the WM PEIS. The four alternatives considered for each waste type are:

- **No Action alternatives:** Use currently existing or planned facilities. A "no action" alternative may not necessarily comply with all applicable laws and regulations.
- **Decentralized alternatives:** Manage waste where it is currently located or where it will be generated, treated, or disposed in the future. Unlike "no action," this alternative may require siting, construction, and operation of new facilities or modification of existing facilities.
- **Regionalized alternatives:** Transport waste to various designated regional sites. In general, those sites that presently have the greatest amount of a particular waste type are being considered as regional sites for treatment, storage, and disposal of that waste.
- **Centralized alternatives:** Transport waste to one or two sites for treatment, storage, or disposal. As with the regionalized alternatives, those sites that have the largest volumes of a given waste type are generally being considered as candidate sites for centralized treatment, storage, and disposal.

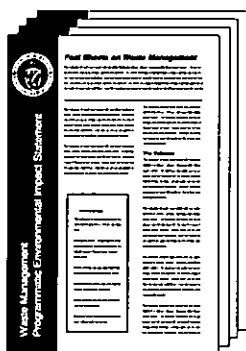
There are many possible combinations for the number and location of DOE sites for treatment, storage, and disposal facilities. DOE selected a range of alternatives to be analyzed for each category to provide decision makers with information on the potential environmental impacts of different strategies.

PUBLIC INVOLVEMENT

Public involvement is essential in making decisions on these important waste management issues. DOE is working with State governments, Tribal governments, the U.S. EPA, and other affected or interested parties to develop solutions for treating, storing, and disposing of its waste.

To provide better information and understanding of the alternatives presented in the WM PEIS, DOE has developed a document summary, a series of fact sheets, and a video. The summary provides an overview of the WM PEIS and includes a reader's guide. Fact sheets address both general WM PEIS topics and site-specific information (see text box below). The video describes the national decisions DOE needs to make re-

WM PEIS FACT SHEETS



General WM PEIS Topics: These fact sheets provide an overview of the WM PEIS, discuss national results of the WM PEIS, and identify public comment opportunities.

Site-specific Fact Sheets: These fact sheets discuss information on the 17 major sites considered in the WM PEIS, the role of each site in the WM PEIS alternatives, and noteworthy results of the WM PEIS analysis.

garding waste management and the analysis in the WM PEIS, as well as highlights the various ways the public can comment on their preferred alternatives and concerns. All of these information products, including the Draft WM PEIS, are available from the Center for Environmental Management Information at 1-800-736-3282.

Comments received on the WM PEIS during a 90-day comment period will be used to fur-

ther analyze the alternatives and make any necessary changes to the WM PEIS. Public hearings via video conferencing will be held during this comment period. Once this process is completed, a Final WM PEIS will be prepared. The Final WM PEIS is scheduled for completion in 1996. Copies of the final document will be mailed to all interested stakeholders and organizations. The NEPA process will conclude with the issuance of Records of Decision (RODs) for each type of waste.

For more information, call

1-800-736-3282

Center for Environmental Management
Information

Information available includes:

- A list of public reading room locations where you can review the WM PEIS
- Dates and locations of public meetings
- Copies of the WM PEIS
- Lists of other available information